

Fluid Delivery System

Abstract

A fluid delivery system includes a fluid storage vessel that feeds a first pipe work loop having a first pump that urges fluid through the first loop at a first pressure and which returns to the vessel. At least one pipe work branch is fed from the storage vessel or the first pipe work loop. The pipe work branch includes a second pump that urges fluid through the pipe work branch at a second pressure. The fluid having flowed through a return manifold is returned to the vessel when the offtakes are closed. Opening of one or more offtakes opens the system to atmospheric pressure and causes the direction of fluid flow to reverse in one or more hoses that connect the one or more opened offtakes with the return manifold. The one or more opened offtakes is supplied with fluid from both the branch manifold and return manifold.